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A NEW SPECIES OF *SONERILA* ROXB. (MELASTOMATACEAE) FROM SOUTHERN INDIA

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ABSTRACT

A new species of *Sonerila* Roxb., namely *S. cannanorensis* is described here with illustrations and SEM photographs of seed coat.

INTRODUCTION

In course of taxonomic studies on the family Melastomataceae of India, the authors came across an interesting material deposited in Madras Herbarium (MH, *Acc. no.* 21450), collected from Pulney Hills, S. India and annotated as "Sonerila". Fortunately some new collections are now available which exactly match with the previous collection (MH *Acc. no.* 21450). The critical studies reveal that these specimens come closer to *S. versicolor* Wt. & Arn., but can be easily distinguished by a number of characters as discussed in notes. The new species also is closely allied to *S. zeylanica* Wt. & Arn., an endemic species to Sri Lanka, but can be differentiated by larger leaves and pinnate venation.

Sonerila cannanorensis *sp. nov.* (Figs. A-E)

Typus : Kerala, Cannanore Dist., Chandanathode, ± 825 m, 18 Dec. 1979, *Ramachandran* 65288 (Holotypus CAL, Isotypus MH).

Herba minora, 6-30 cm alta ; caulis et ramis plus minus quadrangularis, rubris, glabris, superne adnodos radicantibus. Folia opposita, decussata, ovato-lanceolata, (0.8-) 2.0-4.0 (-6.0) × (0.5-) 1.0-1.5 (-2.0) cm, basi distincte inaequalia, obliqua, apice breviter obtuseque acuminata, margine inciso serrata, pinnate veinata, 6-9 plinervia, supra sparse albo setosa, subtus glabra, in nervis sparsissime setosa, minute albo punctata, insicco viridea vel brunneo viridea, membranacea ; petiolus (0.5-) 1.0-1.5 (-2.8) cm longus, glaber. Inflorescentia axillaris vel terminalis, 4-10 flores ; pedunculus 1.0-2.5 cm longus, glaber, rubra ; bracteae minutae. Flores 3-mera, purpurea ; pedicellus breviore, 1.0-2.5 mm longus, glaber vel rariter sparse setosus. Calycis tubus urceolatus, 4-5 mm longus, sparse setosus ; dentes late triangulares, 0.5-0.75 × 0.75-1.0 mm, margine sparse albo setosi, indistincte uninervi. Petala obovata, 6.0-8.0 × 3.0-4.0 mm, nervis centralis dorsalibus sparse setosis, apice attenuata. Stamina 3, filamentis 2.5-3.0 mm longis, glabris ; antheris, late ovatis, apice acutis, hand rostratis, 1.5-2.0 mm longis, biporis. Ovarium glabrum, stylus 4.5-5.5 mm longis ; stigma capitatus, papillosus ; capsula obpyramidalis, 4.0-5.0 mm longa, indistincte 6-costata. Semina numerosa.

Small herbs, attaining 6-30 cm high, stem and branches more or less quadrangular, reddish, glabrous, usually rooting higher up from the woody base forming more or less a stilting habit. Leaves opposite decussate, ovate-lanceolate, (0.8-) 2.0-4.0 (-6.0) × (0.5-) 1.0-1.5 (-2.0) cm, base distinctly unequal, oblique, apex shortly and bluntly acuminate, pinnately veined, 6-9 nerves arising from

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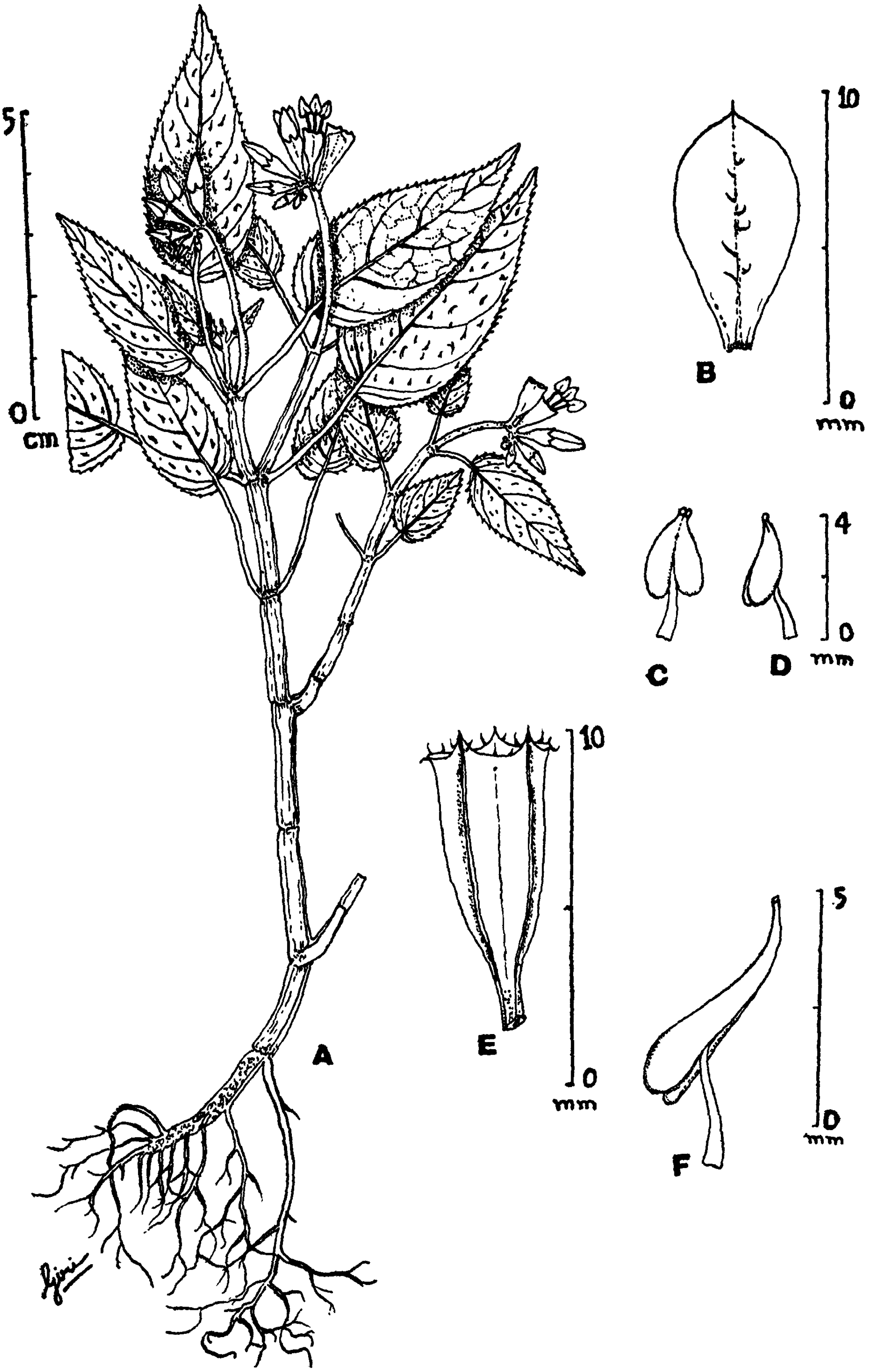

Figs. A-F. *Sonerila cannanorensis* Giri et Nayar
A. Habit. B. Petal. C & D. Stamen (abaxial and lateral view). E. Capsule. F. Stamen of *S. versicolor* Wt. & Arn.

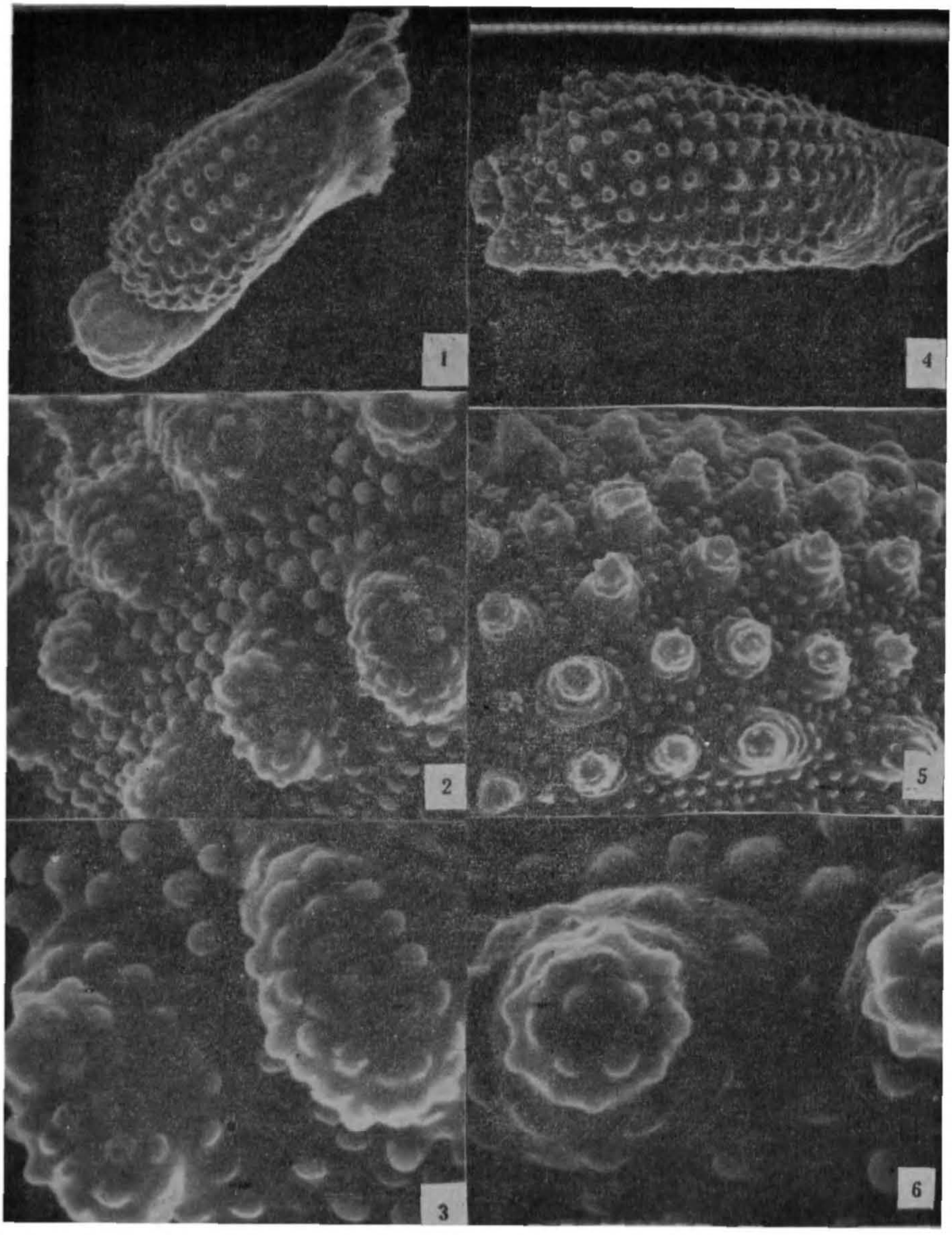

Plate 1. Scanning Electron Micrograph of seed coat

Figs. 1-3 : Seed coat of *Sonerila cannanorensis* Giri et Nayar. 1. Dry intact seed showing dorsal surface covered with small and large tubercles, vesicle prominent (SEM ×100). 2. Part of seed coat showing oval and round tubercles (SEM×800). 3. Boundaries of epidermal cells not distinct, pusticles in between tubercles larger comparing those on the tubercles, exposed surface in between the pusticles remain smooth (SEM×1600).

Figs. 4-6 : Seed coat of *Sonerila versicolor* Wt. & Arn. 4. Dry intact seed showing dorsal surface covered with small and large tubercles (SEM×200). 5. Tubercles pyramidal with broad base and rosette head, boundaries of epidermal cells lined with small pusticles (SEM×400). 6. Two tubercles showing the exposed surface rugose, in between the small pusticles (SEM ×1600).

each side of the midrib, margin sharply serrate, upper surface covered with scattered whitish hairs, lower surface glabrous or with a few scattered hairs on the nerves, minutely white spotted, remain greenish or turn brownish green on drying, membranous ; petioles (0.5-) 1.0-1.5 (-2.8) cm long, glabrous. Inflorescence axillary or terminal scorpoid raceme, 4-10 flowered, peduncle 1.0-2.5 cm long, glabrous, reddish, bracts minute. Flowers 3-merous, purple, pedicels small, not distinct and very often gradually merging with the base of ovary, 1.0-2.5 mm long, glabrous or rarely with a few scattered hairs. Calyx tube urceolate, 4-5 mm long, with a few scattered hairs, lobes broadly triangular, 0.5-0.75 x 0.75-1.0 mm, a few whitish hairs occur on the edges, indistinctly 1-veined. Petals obovate, 6.0-8.0 x 3.0-4.0 mm, midrib dorsally with a few scattered hairs. Stamens 3, filaments 2.5-3.0 mm long, glabrous ; anthers broadly ovate apex acute not beaked, 1.5-2.0 mm long, biporis. Ovary glabrous, style 4.5-5.5 mm long, stigma capitate, papillose. Capsules 4.0-5.0 mm long, indistinctly 6-ribbed. Seeds many.

Distribution : Endemic to Southern India and so far collected from Tamil Nadu and Kerala.

Specimen studied : Kerala : Cannanore Dist., Chandanathode, ± 825 m, 18 Dec. 1979, *Ramachandran* 65288 (Holotype). Tamil Nadu : Pulney Hills, Sine Coll. s.n. (MH *Acc. no.* 21450).

SEED MORPHOLOGY

Sonerila cannanorensis *sp. nov.* Pl. 1, figs. 1-3.

Seeds small, ellipsoid, 0.5 x 0.25 mm (excluding the vesicle), dark brown in colour, raphe remaining out into a lateral appendage, opposite to the hilum end the seed forming a vesicular structure ; dorsally covered with small and large tubercles. At the hilum end the seed smooth or with smaller tubercles and the tubercles become larger towards the vesicular end (Fig. 1 x 100). Large tubercles oval, convex and occur more or less in longitudinal rows. Expose periclinal surface of tubercles pusticulate. Pusticle usually round (Fig. 2 x 800). Boundaries of epidermal cells not distinct. Portions in between the larger, oval tubercles are covered with large pusticles which are differentiated into a small neck and a globose head (Fig. 3 x 1600).

S. versicolor Wt. & Arn. (Pl. 1, figs. 4-6)

Seeds small, ellipsoid, 0.75 x 0.25 mm, dark brown to black in colour, raphe remaining out into a lateral appendage ; dorsally covered with small and large tubercles (Fig. 4 x 100). Large tubercles pyramidal with a broad base and rosette head and with small, round pusticles. Boundaries of the cells remain indistinct. Surface of seed in between the pyramidal tubercles are covered with small pusticles (Fig. 5 x 400). The exposed surface in between the small pusticles is rugose (Fig. 6 x 1600).

Notes : The new species is allied to *S. versicolor* Wt. & Arn., but can be easily distinguished by its glabrous stem and branches, smaller leaves, broadly ovate anthers without a prominent beak and smaller fruits. The SEM studies of seed coat reveal the tubercles in *S. cannanorensis* sp. nov. are oval and convex, the portions in between the oval tubercles are covered with large pusticles whereas in *S. versicolor* Wt. & Arn. the tubercles pyramidal with a rosette head and the portion in between the tubercles are covered with oval small pusticles.